

CLAIMS

What Is Claimed Is:

1. A device to measure a degree of acquisition comprising
a measuring portion that measures a blood amount or/and a blood component amount
in a predetermined measuring region of brains of a subject,
a diachronic change data producing portion that obtains the blood amount or/and the
blood component amount measured in the above-mentioned measuring portion
chronologically and produces diachronic change data as data showing diachronic change of
the blood amount or/and the blood component amount, and
a waveform output portion that outputs a waveform of the diachronic change data in
each work in a comparable manner in case the subject repeatedly conducts the predetermined
work several times.
2. The device to measure a degree of acquisition described in claim 1, and
characterized by that the measuring portion measures at least an amount of deoxyhemoglobin
in blood and the waveform output portion outputs the waveform of the diachronic change
data in accordance with the amount of deoxyhemoglobin.
3. The device to measure a degree of acquisition described in claim 1, and
characterized by that further comprising an acquisition degree calculating portion that
calculates a degree of acquisition to each work for the subject.
4. The device to measure a degree of acquisition described in claim 3, and
characterized by that the acquisition degree calculating portion determines that the degree of
acquisition to the work for the subject is high in case the amount of deoxyhemoglobin tends

to remain generally unchanged or to decrease in the diachronic change data during the work in spite of the lapse of time.

5. The device to measure a degree of acquisition described in claim 1, and characterized by that the predetermined measuring region is an area corresponding to a higher brain function portion.

6. The device to measure a degree of acquisition described in claim 1, characterized by that the predetermined measuring region is set at the frontal lobe.

7. The device to measure a degree of acquisition described in claim 1, and characterized by that the measuring portion measures the blood amount or/and the blood component amount by making use of a near-infrared spectroscopy.

8. The device to measure a degree of acquisition described in claim 7, wherein the measuring portion is a type of one channel.

9. The device to measure a degree of acquisition described in claim 1, in case a posture when the subject conducts a work is different from a posture when the subject does not conduct the work, wherein the blood amount or/and the blood component amount is measured in a state the subject does not conduct the work with taking a posture of conducting the work and a diachronic change of a value that is calculated by subtracting a blood amount or/and a blood component amount when the subject conducts the work from the blood amount or/and the blood component amount measured in the above state is assumed to be the diachronic change data.

10. A device to measure a degree of acquisition comprising
a measuring portion that measures a blood amount or/and a blood component amount in a predetermined measuring portion of brains of a subject,

a diachronic change data producing portion that obtains the blood amount or/and the blood component amount measured in the above-mentioned measuring portion chronologically and produces diachronic change data as data showing diachronic change of the blood amount or/and the blood component amount, and

10. a waveform output portion that outputs a waveform of the diachronic change data in each work in a comparable manner in case the subject conducts a work and other work different from the former work.

11. The device to measure a degree of acquisition described in claim 10, and characterized by that the measuring portion measures at least an amount of deoxyhemoglobin in blood and the waveform output portion outputs the waveform of the diachronic change data in accordance with the amount of deoxyhemoglobin.

12. The device to measure a degree of acquisition described in claim 10, and characterized by that further comprising an acquisition degree calculating portion that calculates a degree of acquisition to each work for the subject.

13. The device to measure a degree of acquisition described in claim 12, and characterized by that the acquisition degree calculating portion determines that the degree of acquisition to the work for the subject is high in case the amount of deoxyhemoglobin tends to remain generally unchanged or to decrease in the diachronic change data during the work in spite of the lapse of time.

14. The device to measure a degree of acquisition described in claim 10, and characterized by that the predetermined measuring region is an area corresponding to a higher brain function portion.

15. The device to measure a degree of acquisition described in claim 10, characterized by that the predetermined measuring region is set at the frontal lobe.

16. The device to measure a degree of acquisition described in claim 10, and characterized by that the measuring portion measures the blood amount or/and the blood component amount by making use of a near-infrared spectroscopy.

17. The device to measure a degree of acquisition described in claim 16, wherein the measuring portion is a type of one channel.

18. The device to measure a degree of acquisition described in claim 10, in case a posture when the subject conducts a work is different from a posture when the subject does not conduct the work, wherein the blood amount or/and the blood component amount is measured in a state the subject does not conduct the work with taking a posture of conducting the work and a diachronic change of a value that is calculated by subtracting a blood amount or/and a blood component amount when the subject conducts the work from the blood amount or/and the blood component amount measured in the above state is assumed to be the diachronic change data.

19. A device to measure a degree of acquisition comprising
a measuring portion that measures an amount of deoxyhemoglobin in a predetermined measuring region of brains of a subject,

a diachronic change data producing portion that obtains the amount of deoxyhemoglobin measured in the above-mentioned measuring portion chronologically and produces diachronic change data as data showing diachronic change of the amount of deoxyhemoglobin, and

a waveform output portion that outputs a waveform of diachronic change data in case the subject conducts a predetermined work.

20. The device to measure a degree of acquisition described in claim 19, and characterized by that further comprising an acquisition degree calculating portion that calculates a degree of acquisition to each work for the subject.

21. The device to measure a degree of acquisition described in claim 20, and characterized by that the acquisition degree calculating portion determines that the degree of acquisition to the work for the subject is high in case the amount of deoxyhemoglobin tends to remain generally unchanged or to decrease in the diachronic change data during the work in spite of the lapse of time.

22. The device to measure a degree of acquisition described in claim 19, and characterized by that the predetermined measuring region is an area corresponding to a higher brain function portion.

23. The device to measure a degree of acquisition described in claim 19, characterized by that the predetermined measuring region is set at the frontal lobe.

24. The device to measure a degree of acquisition described in claim 19, and characterized by that the measuring portion measures the blood amount or/and the blood component amount by making use of a near-infrared spectroscopy.

25. The device to measure a degree of acquisition described in claim 24, wherein the measuring portion is a type of one channel.

26. The device to measure a degree of acquisition described in claim 19, in case a posture when the subject conducts a work is different from a posture when the subject does not conduct the work, wherein the blood amount or/and the blood component amount is measured in a state the subject does not conduct the work with taking a posture of conducting the work and a diachronic change of a value that is calculated by subtracting a blood amount

or/and a blood component amount when the subject conducts the work from the blood amount or/and the blood component amount measured in the above state is assumed to be the diachronic change data.

27. A method for measuring a degree of acquisition wherein a blood amount or/and a blood component amount in a predetermined measuring region of brains of a subject is measured chronologically with the use of a near-infrared spectroscopy,

diachronic change data as data showing diachronic change of the blood amount or/and the blood component amount is produced and

a degree of acquisition to a work for a subject is determined based on the diachronic change data.